

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A method, performed at a gateway node forming a gateway between a first environment and a second environment, of using the Host Identity Protocol (HIP) to at least partially secure communications between a first host operating in ~~[[a]]~~ the first network environment and a second, HIP-enabled, host operating in ~~[[a]]~~ the second network environment, ~~at a gateway node forming a gateway between the two environments~~, the method comprising:

associating an identifier with the first host at the gateway node;

storing the identifier at the gateway node;

sending the identifier to the first host;

receiving a session initiation message from the first host, where a source address of the session initiation message comprises the identifier, and where the session initiation message indicates that a destination of the session initiation message is the second host; and

using the stored identifier to negotiate a secure HIP connection to the second host.

2. (Previously Presented) The method as claimed in claim 1, wherein the identifier is generated at the gateway node.

3. (Previously Presented) The method as claimed in claim 2, wherein the identifier is generated in response to the sending of a context activation request from the first host to the gateway node.

4. (Previously Presented) The method as claimed in claim 3, wherein the

context activation request is a Packet Data Protocol (PDP) context activation request to activate a PDP context, and the identifier is used as the PDP address in the PDP context.

5. (Previously Presented) The method as claimed in claim 1, wherein the first host is not HIP enabled and the secure HIP connection is negotiated between the gateway node and the second host.

6. (Previously Presented) The method as claimed in claim 1, wherein the first host is HIP enabled and the secure HIP connection is negotiated between the first and second hosts

7. (Previously Presented) The method as claimed in claim 1, wherein the identifier is of the same length as an address in the addressing scheme used by the first host for communication with the gateway node.

8. (Previously Presented) The method as claimed in claim 7, wherein an IP addressing scheme is used and the identifier is used as the source IP address in the session initiation message.

9. (Previously Presented) The method as claimed in claim 1, wherein the identifier is a look-up identifier associated with a HIP identity tag generated for and associated with the first host, allowing the HIP identity tag for the first host to be retrieved at the gateway node using the look-up identifier.

10. (Previously Presented) The method as claimed in claim 1, wherein the identifier is a HIP identity tag.

11. (Previously Presented) The method as claimed in claim 9, wherein the HIP identity tag is included in a HIP header during negotiation of the HIP connection

between the gateway and the second host.

12. (Previously Presented) The method as claimed in claim 11, wherein the HIP identity tag is a Host Identity Tag (HIT) or a Local Scope Identifier (LSI).

13. (Previously Presented) The method as claimed in claim 9, wherein the HIP identity tag is generated from a key pair.

14. (Previously Presented) The method as claimed in claim 13, wherein the key pair which is stored in the gateway node for use during subsequent HIP communications between the gateway node and the second host.

15. (Previously Presented) The method as claimed in claim 1, wherein the identifier is in the form of an IP address.

16. (Previously Presented) The method as claimed in claim 1, wherein the first network environment is a mobile network environment.

17. (Previously Presented) The method as claimed in claim 16, wherein the mobile network environment is a 3G mobile environment.

18. (Previously Presented) The method as claimed in claim 17, wherein the mobile network environment is a UMTS mobile network environment.

19. (Previously Presented) The method as claimed in claim 1, wherein the second network environment is an Internet network environment.

20. (Previously Presented) The method as claimed in claim 1, wherein the gateway node provides the functionality of a HIP proxy.

21. (Previously Presented) The method as claimed in claim 1, wherein the gateway node is a Gateway GPRS Support Node (GGSN).

22. (Previously Presented) The method as claimed in claim 1, comprising replacing the identifier with an address associated with the gateway node as the source address in a subsequent message sent to the second host.

23. (Previously Presented) A communications system comprising:
a first host operating in a first network environment,
a second, Host Identity Protocol (HIP) enabled, host operating in a second network environment,
a gateway node forming a gateway between the two environments,
means for associating an identifier with the first host at the gateway node,
means for storing the identifier at the gateway node,
means for sending the identifier to the first host,
means for receiving a session initiation message from the first host, where a source address of the session initiation message comprises the identifier, and where the session initiation message indicates that a destination of the session initiation message is the second host, and
means for using the stored identifier at the gateway node to negotiate a secure HIP connection to the second host.

24. – 30. (Canceled)

31. (Currently amended) An apparatus for using the Host Identity Protocol (HIP) to at least partially secure communications between a first host operating in a first network environment and a second, HIP-enabled, host operating in a second network environment, the apparatus comprising a gateway node forming a gateway between the two environments, the gateway node comprising:

means for associating an identifier with the first host at the gateway node;

means for storing the identifier at the gateway node;

means for sending the identifier to the first host;

means for receiving a session initiation message from the first host, where a source address of the session initiation message comprises the identifier, and where the session initiation message indicates that a destination of the session initiation message is the second host; and

means for using the stored identifier to negotiate a secure HIP connection to the second host.